



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.    | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------|------------------|
| 09/765,675   | 01/22/2001  | Veronique Douin      | 05725.0830             | 6349             |
| 22852 7590 01/16/2007<br>FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER<br>LLP<br>901 NEW YORK AVENUE, NW<br>WASHINGTON, DC 20001-4413 |             |                      | EXAMINER<br>YU, GINA C |                  |
|  |             |                      | ART UNIT               | PAPER NUMBER     |
|  |             |                      | 1617                   |                  |
| SHORTENED STATUTORY PERIOD OF RESPONSE   |             | MAIL DATE            | DELIVERY MODE          |                  |
| 2 MONTHS   |             | 01/16/2007           | PAPER                  |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**RECEIVED**  
JAN 16 2007  
TECH CENTER 1600/2900

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/765,675  
Filing Date: January 22, 2001  
Appellant(s): DOUIN ET AL.

---

LOUIS TRIOLO  
For Appellant

**EXAMINER'S ANSWER**

Art Unit: 1617

This is in response to the appeal brief filed August 17, 2006 and the supplemental to the appeal brief, filed on October 6, 2006, appealing from the Office action mailed on July 13, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

|                      |                         |                |
|----------------------|-------------------------|----------------|
| <b>EP 0842652 A1</b> | <b>RESTLE ET AL.</b>    | <b>8-1996</b>  |
| <b>US 5,135,748</b>  | <b>ZIEGLER ET AL.</b>   | <b>8-1992</b>  |
| <b>US 6533873 B1</b> | <b>MARGOSIAK ET AL.</b> | <b>03-2003</b> |
| <b>US 5,617,418</b>  | <b>MATZIK ET AL.</b>    | <b>2-1998</b>  |
| <b>EP 0780114 A1</b> | <b>SIMONNET</b>         | <b>6-1997</b>  |

Restle et al. "Nonionic and cationic amphiphilic lipid-based nanoemulsion and its use", PTO 04-0435, English translation of EP 0842652 A1.

Decoster et al., "Washing cosmetic product composition and use of the same", PTO 04-0437, English translation of JP H10-338899 (Dec. 22, 1998).

Knowlton, J., "Emulsion Theory", Poucher's Perfumes, Cosmetics and Soaps, (9<sup>th</sup> ed. by Hilda Butler), Chapman & Hall, p. 552-3.

#### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**(A) Claims 1-19, 21-23, 28-62, and 68-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Restle et al. (EP 0842652 A1) in view of Ziegler et al. (U.S. Pat. No. 5,135,748) and Margosiak et al. (US 6533873 B1) and Knowlton (Poucher's Perfumes, Cosmetics, and Soaps, Emulsion Theory).**

Restle et al. teach an oil-in-water emulsion wherein the oil globules have size of less than 150nm, comprising an amphiphilic lipid phase containing at least one non-ionic amphiphilic lipid phase and at least one cationic amphiphilic lipid. See English translation, Description. See instant claims 1 and 23. The amount of oil to the amount

Art Unit: 1617

of amphiphilic lipid phase ranges from 2:1 to 10:1. See instant claims 2, 3, 28, and 29. See English translation, p. 2, 1<sup>st</sup> par. – p. 4, 1<sup>st</sup> par. The average size of the oil globules is disclosed. See claim 4. The nonionic amphiphilic lipids and the use thereof as described by instant claims 17-19, 21 and 22 are disclosed in p. 4, 2<sup>nd</sup> par. – p. 6, bridging par. The cationic amphiphilic lipids of instant claims 30-58 are disclosed in p. 7, 1<sup>st</sup> full par. – p. 16, 1<sup>st</sup> par. The oil described in instant claims 59 – 62 are disclosed in p. 6, 2<sup>nd</sup> par. – p. 18, last par. The use of the emulsion in the form of lotion, serum or gel for therapeutic or non-therapeutic cosmetic purposes is disclosed in pp. 20-21. See claims 68-83. As for Claims 78-82, Restle teaches the nonionic amphiphilic lipids having both hydrophobic and hydrophilic block, which are the silicone surfactants shown in p. 4, 2<sup>nd</sup> full par. – p. 6, last full par.

The reference lacks the teaching of the cationic polymers of claims 5-16.

Ziegler et al. teach a cosmetic o/w composition comprising quaternary ammonium phosphate esters and 0.10-10% by weight of cationic polymers which meet the limitation of claims 5-16. See col. 2, lines 2 – 14; col. 2, line 17 – col. 6, line 11. The reference teaches the composition provides stability against phase separation during freeze-thaw cycles and is effective in moisture retention.

Restle et al. and Ziegler et al. fail to teach that the nanoemulsion whose average oil particle size of 150 nm has the turbidity as claimed by applicants.

Knowlton teaches that in emulsion art, “when the particle size falls below 0.1 microns (100 nm) the emulsions appear blue-gray to translucent, to transparent.” See p. 552, 3<sup>rd</sup> full par., Table 19.2.

Margosiak et al. teach that a gel formulation having a clear appearance has a turbidity less than or equal to 105 NTU, which is within the claimed turbidity range by applicants. See col. 2, lines 2-4.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of Restle et al. by adding the cationic polymers, as taught by Ziegler et al., because of the expectation of successfully producing a cosmetic composition with enhanced stability and moisture retention.

It would have been obvious to one of ordinary skill in the art that the Restle nanoemulsion whose average particle size of oil globules is smaller than 150 nm is translucent to transparent, as suggested by Knowlton, and has turbidity at or below 150 NTU, as suggested by Margosiak et al.

**(B) Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Restle et al., Ziegler et al., Knowlton, and Margosiak et al. as applied to claims 1-19, 21-23, 30-62, and 68-83 above, and further in view of Simonnet (EP 078114 A1).**

Restle et al., Ziegler et al., Knowlton, and Margosiak et al. are discussed above. The combined references fail to teach the amphiphilic anionic lipids claimed by applicants.

Simonnet teaches a transparent oil-in-water emulsion for cosmetic use wherein the oil globules have a mean size of less than 100nm and at least one silicone surfactant. See p. 1, line 2 – 11. The use of up to 20% of ionic amphiphilic lipids, including anionic lipids, amphoteric ionic lipids are disclosed in p. 3, line 33 – p. col. 4, line 6. See instant claims 17 and 21 - 29. See also Examples. The reference also

Art Unit: 1617

teaches that emulsions with particle size less than 100nm are transparent similar to water, and further teaches that when the particle size is 57nm the transparency of the composition is 67%. See p. 2, lines 9 – 11; p. 6, lines 25-6.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of the combined references by adding the anionic amphiphilic lipids as taught by Simonnet because of the expectation of successfully producing a transparent cosmetic emulsion composition with well known surfactants in the art.

**(C) Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Restle et al., Ziegler et al., Knowlton, Margosiak et al., Simonnet as applied to claims 1-19, 21-62, and 68-83 above, and further in view of Matzik et al. (U.S. Pat. No. 5,716,418).**

Restle et al., Ziegler et al., Simonnet are discussed above. The combined references fail to teach the anionic amphiphilic lipids of instant claim 20.

Matzik et al. teach hair coloring composition containing anionic surfactants including fatty alkyl ether citrates. See col. 1, line 50 – col. 2, line 38.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of the combined references by adding the anionic amphiphilic lipid as taught by Matzik et al. because of the expectation of successfully producing cosmetic composition with a known surfactants in the art.

**(D) Claims 64-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Restle et al., Ziegler et al., Knowlton, Margosiak et al., Simonnet, and Matzik**

**et al., as applied to claims 1-62 and 68-83 above, and further in view of Decoster et al. (English translation of JP H10-338899).**

Restle et al., Ziegler et al., Simonnet, and Matzik et al., are discussed above. Restle further teaches that the nanoemulsion is applicable in making washing and cleansing formulations for hair and skin. See translation, p. 20, 2<sup>nd</sup> par. – p. 21, last par. Shampoo is taught. See p. 20, 3<sup>rd</sup> par. While Restle teaches to incorporate skin-conditioning agents, the combined references fail to teach aminosilicone. See p. 18, last par.

Decoster et al. teach cosmetic detergent composition comprising 0.05-5 weight % of aminosilicone, anionic surfactant, amphoteric surfactants and cationic polymers. See translation, p. 16, [0015] – p. 25, [0025]. The reference teaches that the specific hair conditioning system, comprising the aminosilicone and cationic polymer (quaternary ammonium compounds), provides cosmetic benefits, which includes disentangling, softness, the silkiness and volume, while retaining good washing property. See translation, p. 12, [0008]-p. 13, [0009].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of the combined references by adding the aminosilicone, as motivated by Decoster et al., because 1) Restle et al. and Decoster et al. are directed to hair and skin cleansing compositions, specifically shampoo and skin cleansing compositions; 2) Decoster et al. teach that the amino silicone/cationic polymer combination provides hair or skin conditioning benefits while retaining good washing properties; and 3) Restle teaches to incorporate skin conditioning active components, including silicones.



The skilled artisan would have had a reasonable expectation of successfully producing a nanoemulsion hair shampoo or body wash composition with improved or similar conditioning benefits because 1) Restle teaches the applicability of the nanoemulsion in shampoo or skin cleansing formulations and 2) Decoster also teaches the applicability of the conditioning system in detergent compositions, and 3) both references teach using quaternary ammonium cationic polymers.

**(10) Response to Argument**

Examiner asserts that the claimed composition of claim 1 is an obvious variation of the nanoemulsion of Restle that is made as motivated by Ziegler. Restle teaches oil-in-water nanoemulsions wherein the oil globules have size of less than 150 nm, comprising an amphiphilic lipid phase containing at least one non-ionic amphiphilic lipid phase and at least one amphiphilic lipid. Restle in p. 17 teaches that, if necessary, the transparency of the emulsion is improved by adding additives, which suggests that the emulsion has transparent property, and the turbidity limitation of the present claim is not a critical matter. Furthermore, one of ordinary skill would have reasonably expected that the nanoemulsion property of the Restle invention, as well as transparency, would be maintained by combining the Ziegler cationic polymer. Among the active ingredients for the composition Restle, cationic polymers in particular are suggested in the reference. See Restle, p. 18, last line. Thus, the skilled artisan would have had a reasonable expectation of success in combining the teachings of Restle/Ziegler references to realize advanced moisturizing effect and stability of the emulsion, with no detrimental effect to the nano-emulsion compositions.

(A) Claims 1-19, 21-23, 28-62, and 68-83

Examiner asserts that the turbidity limitation of the claim is not a nonobvious, new property of the nanoemulsion made in view of the prior arts. The combined teachings of the references provide a skilled artisan in emulsion art that the emulsions having particles of discontinuous phase in micron – or submicron scale generally produce transparent or translucent property.

Examiner takes the position that appellants' description of Knowlton does not fairly represent what a reasonable skilled artisan would have learned from the reference. Through out the brief, appellants assert as though the dependent clause in the statement is the only substance of the Knowlton reference, while completely ignoring the main teaching of the reference. What Knowlton teaches is a "guideline" for the correlation of the discontinuous phase particle and the transparency of the emulsion, as shown in Table 19.2. In fact, the reference specifically provides, "when the particle size falls below 0.1 um a large proportion of the transmitted light passes through the body of the emulsion without hindrance, thus resulting in a translucent appearance". Knowlton's caution against total generalization merely indicates that there may be other factors that affect turbidity. Examiner asserts that a reasonable skilled artisan would not have interpreted that the transparency of a nano-emulsion is not affected by the particle size of the dispersed phase, as appellants argue. Examiner also asserts that the evidence of the record makes a prima facie case of obviousness that the nano-emulsion which is made as motivated by the Restle/Ziegler references would be transparent or translucent, and thus the rejection should be maintained.

(B) Claims 24-27

Appellants' arguments here are based on the alleged validity of the rebuttal arguments above. Examiner asserts that the rejection should be maintained for the reasons as stated in the rejection above.

(C) Claim 20

Appellants' arguments here are based on the alleged validity of the rebuttal arguments above. Examiner asserts that the rejection should be maintained for the reasons as stated in the rejection above.

(D) Claims 64-67

Appellants' arguments here are based on the alleged validity of the rebuttal arguments above. Examiner asserts that the rejection should be maintained for the reasons as stated in the rejection above.

Appellants also argue that there is no motivation to incorporate the detergent base of Decoster into the Restle composition. Appellants' assert, "[B]ecause Restle already discloses a composition for washing and cleaning, one would not be motivated to incorporate complete conditioning system and detergent base of Decoster because there is no teaching or suggestion to make the alleged combination." The argument is unpersuasive. The strongest rationale for combining references is a recognition, expressly or impliedly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent, that some advantage or expected beneficial result would have been produced by their combination. See In re Sernaker, 702 F.2d 989, 994-95, 217 USPQ 1, 5-6 (Fed. Cir. 1983). While Restle teaches the application of the nanoemulsion in the form of shampoo or cleanser for body, Decoster provides an enabling disclosure of a washing base which has specific cosmetic benefits.

Art Unit: 1617

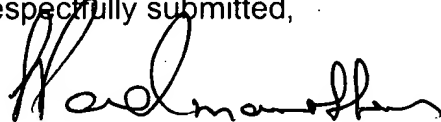
As stated in the rejection, it is obvious that a skilled artisan would have been driven to combine the detergent base and the aminosilicone of Decoster with Restle nanoemulsion to obtain the cosmetic benefits as described by the prior arts. Also as indicated in the rejection, the skilled artisan would have had a reasonable expectation of success because Restle teaches the application of the nano-emulsions in detergent compositions.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,




Sreeni Padmanabhan,  
Art Unit 1617  
Supervisory Patent Examiner

Conferees:

Michael Woodward  
Art Unit 1615  
Supervisory Patent Examiner



MICHAEL P. WOODWARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600



Gina C. Yu  
Art Unit 1617  
Patent Examiner